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ABSTRACT

This study examined the problem-solving and decision-making concepts included in the Consumer and Homemaking curricula in Illinois. Data were taken from a larger study, "Evaluating Program Outcomes: Occupation of Homemaking," conducted under the auspices of the Illinois State Board of Education. Through telephone interviews, 333 randomly selected Illinois high school graduates (between 1979 and 1984) rated each concept on a 10-point Likert scale. Each concept was rated twice: once, to rate importance of the concept to adult functioning and second, the graduates' competence. Of the 57 concepts included in the Consumer and Homemaking curricula, 16 related to problem solving and decision making. Using a t-test, differences were found between those who had enrolled in one or more home economics courses and those who had no home economics course. A confounding variable is that consumer education is required of every high school graduate in Illinois. When data were analyzed according to course taken, three courses showed significant differences for competence. Respondents enrolled in home economics courses did perceive the importance of problem-solving and decision-making processes for adult living higher than respondents not enrolled in home economics courses. Results also showed enrollment in home economics courses increases the perceived competence of problem solving and decision making processes. (Eighteen references and the interview schedule are included.) (NLA)

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NORTHERN ILLINOIS UNIVERSITY

ASSESSMENT OF IMPORTANCE AND COMPETENCE OF PROBLEM-SOLVING AND DECISION-MAKING SKILLS IN THE HOME ECONOMICS CLASSROOM

A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE
MASTER OF SCIENCE

DEPARTMENT OF HUMAN AND FAMILY RESOURCES

BY

SUSAN M. PLESKAC

DEKALB, ILLINOIS

MAY 1990

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ABSTRACT

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ABSTRACT

The purpose of this study is the examination of problem-solving and decision-making processes and their perceived importance for adult life and competency of respondents as achieved through the secondary home economics curriculum. Extant data was utilized. Respondents enrolled in home economics courses did perceive the importance of problem-solving and decision-making processes for adult living slightly more than respondents not enrolled in home economics courses. Results also showed enrollment in home economics courses increases the perceived competence of problem-solving and decision-making processes.

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INTRODUCTION

Efforts in the educational setting to comply with legislative goals, school district mandates, research findings, plus parental and student demands often lead to challenges for curriculum development and implementation. In preparing youth for the future, the Education Commission of the States appointed a committee of leaders from various organizations and industries in 1982 to identify skills necessary for youth in the future. They listed "evaluation and analysis skills, critical thinking, problem solving strategies, organization and reference skills, synthesis, application, creativity, decision making given incomplete information, and communication skills through a variety of modes" (from McTighe, in Costa, 1985, p. 4). These educational objectives are not new. From John Dewey's writings in the early 1900s through current reports, such as A Nation at Risk by the National Commission of Excellence (1983), thinking skills have been on the national agenda for classroom instruction. In his study of the nation's schools, Goodlad (1984) observed the presence of this aim reflected in the adopted goals of most state and individual school systems.

Theorists and researchers have had difficulty in developing a concise definition of critical thinking and thinking skills in general. Ennis (1985) offers critical thinking as "reasonable,

reflective thinking that is focused on deciding what to believe or do" (p. 54). Marzano (1988) clarifies this definition by suggesting critical thinking is the "judgement about the quality of thinking involved" (p. 17), and not a specific process. He offers critical thinking as the way specific processes are carried out, identifying problem solving and decision making as two specific thinking processes that focus on the production and application of knowledge. Problem solving can be defined as goal-directed behavior. Van Dijk, as quoted by Marzano (1988), suggested problem solving "occurs when a particular goal requires mental operations and steps" (p. 45) toward solutions. In contrast, decision making is defined by Halpren (1984), as a process involving two or more competing alternatives that may or may not be obvious to the decision maker. Marzano (1988) suggests "that although students and teachers use knowledge-acquisition processes to build a foundation for learning any content area, the knowledge is useful only to the degree that students can apply the knowledge or produce new knowledge" (p. 64). Though the theorists and researchers such as Beyer, Ennis, and Paul vary in their definitions and process for acquisition of thinking skills, they do agree these thinking processes can be taught and learned.

Legislative parameters of the Vocational Amendments of 1976 and the Carl Perkins Vocational Education Act of 1984 defined the occupation of homemaking and outlined the conceptual foundations of the home economics curriculum for the secondary school. Implied in their definition of course content were the processes of problem

solving and decision making. The National Institute of Education, responsible for the review and evaluation of the effectiveness of consumer and homemaking programs stated, "relatively little rigorous research has been conducted on the effects of consumer and homemaking education programs on learners in terms of changes in knowledge, attitudes, or behavior" (U.S.D.E., 1981, p. VI:24-25). Research on the assessment of students in developing problem-solving and decision-making skills through home economics curriculum remains minimal. Clark & Reagan (1987), who sought to determine content justification for consumer education classes, found consumers and home economics teachers rated decision making as the most important skill to be taught. Crawford & Hughes (1984) found students taking home economics classes indicated these courses helped them with consumer decision making. A 1989 research project by the American Home Economics Association on American teens found 34% of American youth are concerned with making wrong decisions. In addition, 33% felt schools should prepare them for making important life decisions (Schultz, 1989).

The importance of teaching the processes of problem solving and decision making to our youth makes the assessment of these skills vital. The purpose of this study is to assess the perceived importance and competence of problem-solving and decision-making processes by students as attained through the home economics curriculum. The hypotheses for this study include: (1) the perceived importance of problem-solving and decision-making skills

will be greater for students who have completed two or more courses in home economics as compared to students who have taken one or less courses; (2) the perceived competency of problem-solving and decision-making skills will be greater for students who have completed two or more courses in home economics as compared to students who have taken one or less courses; and (3) the perceived importance and perceived competence of problem-solving and decision-making skills will be greater for students who have completed specific courses in adult living, food and nutrition, living environments, parenting, or resource management as compared to students who have not completed stated courses.

METHODOLOGY

This study utilized the extant data drawn from the survey and collected under the 1987-89 Illinois State Board of Education/ Department of Adult, Vocational, and Technical Education grant: Evaluating Program Outcomes: Occupation of Homemaking" (Winsor, 1988). A primary objective of the grant included the necessity of assessing problem-solving and decision-making skills in the home economics classroom. Specific questions in the survey targeted these thinking processes.

The research design included the stratified random sample selection from eight geographical areas of Illinois. The 333 students sampled graduated from high school between the years of 1979-1984. The randomly selected students were grouped by those who had enrolled in two or more courses in home economics and students who had one or less courses in home economics. The delineation was created due to individual policies of some some school districts requiring one course of home economics for all students. Each student received a letter and a consent form to sign before being contacted by the Public Opinion Laboratory at Northern Illinois University for the computer-assisted telephone interview survey conducted by professional telephone interviewers.

The 143-item instrument included demographic data, family charactertistics, course information, and course content items. Course content items utilized a Likert-type scale of 0-10; 0 = no importance/competence in relation to the specified concept and 10 = highest importance/competence in relation to the specified concept. Each respondent answered the concept questions twice: first, on the degree of importance the knowledge of the concept presented to adult life, and second, how competent the respondent assessed him/herself in relation to the concept. The 102 concept questions were derived from the Illinois State Goals for Learning and Sample Learning Objectives, Task Lists for the Occupation of Homemaking, and the legislative parameters of the Vocational Amendments of 1976 and the Carl Perkins Vocational Education Act of 1984 defining the Occupation of Homemaking. Content validation was determined first by a review of the instrument by experts representing vocational teacher education programs in Illinois universities. Second, a review was conducted by leaders in the field from differing geographic locations throughout Illinois. Reliability was addressed by field testing the instrument and the use of Cronbach's Alpha, yielding a reliability coefficient of .9667.

For the purpose of this study, a panel of home economists identified 32 of the concept items as addressing problem-solving and decision-making processes. These items of perceived importance and competence were analyzed individually, grouping students who had enrolled in home economics courses and those students who had not

enrolled. A second analysis grouped the concepts by particular courses in which they are taught, and compared the mean scores of those students who had enrolled in home economics courses and those who had not enrolled. A third analysis grouped students who had taken specific courses within the home economics curriculum as per concept and those students who had not enrolled in stated courses. The research hypotheses for this study are directional, implying the necessity of utilizing one-tailed t-test procedures of the SPSSX computer program. Statistical probability was computed at $p < .05$. Analysis of descriptive data was also utilized.

RESULTS

Table 1 presents the mean scores of respondents' ratings of perceived importance and competence of concepts. Respondents consistently ranked both the importance of and competence in problem-solving and decision-making concepts very high. Mean scores for importance ranged from 8.28 to 9.52 for group 1, those enrolled in home economics courses and 7.22 to 9.41 for group 2, those not enrolled in home economics courses. The mean scores of group 2 were consistently lower than the mean scores of group 1 with significant differences in 11 of the 16 concepts. These concepts include selection of clothing, furniture, housing, food, and kitchen equipment as well as problem solving, goal setting, time management, and decision making.

With regard to perceived competence of concepts, mean scores of respondents in group 1 were reported consistently higher, ranging from 7.11 to 8.42, than the non-homemaking respondents of group 2. Those scores ranged from 6.89 to 8.27 with significant differences reported in 9 of the 16 concepts. Greatest significant differences were observed for the concepts of time-management skills, meeting family crises, and selection of clothing, kitchen equipment, and food. Concepts of decision-making skills, comparison shopping

Table 1

Problem Solving and Decision Making: Statistical Relationship of Importance and Competence of Concepts by Respondents Enrolled or Not Enrolled in Home Economics Courses

Question/Concept	Importance				Competence			
	Group 1		Group 2		Group 1		Group 2	
	#	mean	#	mean	#	mean	#	mean
Decision-making skills	242	9.16	90	8.93	242	7.80	89	7.62*
Time-management skills	242	9.05	90	8.76*	242	7.57	89	7.10**
Career information/selection of educational program	242	8.61	89	8.33	242	7.36	88	7.33
Problem solving	242	8.93	90	8.58**	242	7.79	89	7.89
Meeting of family crises	242	9.44	90	9.21*	242	8.33	88	7.65***
Comparison shopping for clothing	242	8.65	90	8.14**	242	7.98	89	7.46*
Clothing selection	242	8.78	90	8.16***	242	8.42	89	7.72***
Making housing choices	242	8.90	90	8.62*	242	7.88	89	7.72
Furniture selection/ construction and cost	242	8.48	90	7.22***	242	7.68	89	7.34*
Selection/purchasing prepared/non-prepared foods	242	8.83	90	8.52*	242	8.14	89	7.65**
Selection, use and care of kitchen equipment	242	8.83	90	8.20***	242	8.50	89	8.01**
Selection of a mate	242	9.52	89	9.41	242	8.40	89	7.93*
Changing family lifestyles	239	8.28	89	8.12	242	7.11	87	6.89
Establishing priorities, needs/wants	242	9.21	90	8.93	242	8.10	89	7.93
Comparative shopping	242	8.88	90	8.44**	242	8.37	89	8.27
Goal setting and decision making	242	9.38	90	9.12*	242	8.10	89	7.87

Group 1 = Respondents enrolled in home economics courses.

Group 2 = Respondents not enrolled in home economics courses.

*$p<.05$

**$p<.01$

***$p<.001$

for clothing and furniture, and selection of a mate also showed significant differences.

Concepts are grouped by courses taught within the home economics curriculum in Table 2. Respondents enrolled in home economics rated the concepts more important than students not enrolled in home economics with significant differences in 6 of the 7 courses. Perceived competence in problem-solving and decision-making skills as taught through specific courses show group 1 with higher mean scores than respondents in group 2. Significant differences are indicated in parenting, clothing and textiles, food and nutrition, adult living, and orientation to home economics.

Table 3 compares mean scores of respondents enrolled in specific courses as per concept with respondents not enrolled in specific courses. Mean scores for group 1 are consistently above those of group 2 with significant differences in 9 of the 16 concepts. These concepts are decision-making skills, time-management skills, comparison shopping for clothing, selection of clothing, furniture, food, and kitchen equipment. All respondents rated the importance of concepts for adult life between 8.13 and 9.53 on the give scale of 0-10, 10 representing the highest importance. Corresponding mean scores of perceived competency were lower than perceived importance levels for all respondents. In 13 of the 16 concepts, respondents enrolled in specific courses rated their competency levels higher than those not enrolled in 13 of the 16 concepts. Significant differences were observed for the concepts of

Table 2

Problem Solving and Decision Making: Statistical Relationship of Importance and Competence of Concepts Taught in Specific Courses by Respondents Enrolled or Not Enrolled in Home Economics Courses

Course	Importance				Competence			
	Group 1		Group 2		Group 1		Group 2	
	#	mean	#	mean	#	mean	#	mean
Orientation to Home Economics	242	8.94	89	8.67*	240	7.95	88	7.66**
Parenting	242	9.44	90	9.21*	242	8.33	88	7.65***
Clothing and Textiles	242	8.71	90	8.15***	242	8.20	89	7.59**
Living Environment	242	8.69	90	8.17***	242	7.78	89	7.53
Food and Nutrition	242	8.83	90	8.36**	242	8.32	89	7.83**
Adult Living	239	8.90	88	8.76	237	7.74	87	7.42*
Resource Management	242	9.16	90	8.83**	242	8.19	89	8.02

Group 1 = Respondents enrolled in home economics courses.

Group 2 = Respondents not enrolled in home economics courses.

*$p<.05$

**$p<.01$

***$p<.001$

Table 3

Problem Solving and Decision Making: Statistical Relationship of Importance and Competence of Concepts by Respondents Enrolled and Not Enrolled in Specific Course as Per Concept with Like or Similar Title

Question/Concept	Importance				Competence			
	Group 1		Group 2		Group 1		Group 2	
	#	mean	#	mean	#	mean	#	mean
Decision-making skills	201	9.20	130	8.93*	201	7.99	129	7.77
Time-management skills	201	9.11	130	8.77**	201	7.55	129	7.27
Career information/selection of educational programs	201	8.60	129	8.39	199	7.37	128	7.33
Problem solving	201	8.94	130	8.67	201	7.82	129	7.83
Meeting family crises	97	9.43	235	9.35	97	8.51	233	7.99***
Comparison shopping for clothing	161	8.73	171	8.30**	161	8.05	170	7.63*
Clothing selection	161	8.88	171	8.37***	161	8.45	170	8.02**
Making housing choices	55	9.00	276	8.79	55	8.07	275	7.80
Furniture selection/ construction and cost	55	8.60	276	8.21*	55	7.61	275	7.59
Selection/purchasing prepared/non-prepared foods	183	8.91	148	8.54**	183	8.26	147	7.68***
Selection, use and care of kitchen equipment	183	8.90	148	8.34***	183	8.52	147	8.16**
Selection of a mate	120	9.53	211	9.47	120	8.43	210	8.19
Changing family lifestyles	117	8.44	211	8.13*	118	7.20	207	6.95
Establishing priorities/ needs/wants	63	9.11	267	9.14	63	8.02	266	8.06
Comparative shopping	63	8.24	267	8.88	63	8.03	266	8.41
Goal setting and decision making	63	9.17	267	9.34	63	8.00	266	8.05

Group 1 = Respondents enrolled in specific course as per concept.

Group 2 = Respondents not enrolled in specific course as per concept.

*$p<.05$

**$p<.01$

***$p<.001$

meeting family crises, comparison shopping for clothing, and selection of clothing, foods, and kitchen equipment.

When concepts are grouped by course titles, as in Table 4, mean scores of respondents enrolled in specific courses of orientation to home economics, clothing and textiles, living environments, food and nutrition, and resources management show significant differences when rating perceived importance to adult life.

Table 4

Problem Solving and Decision Making: Statistical Relationship of Importance and Competence of Concepts Taught in Specific Courses by Respondents Enrolled or Not Enrolled in Specific Courses

Course	Importance				Competence			
	Group 1		Group 2		Group 1		Group 2	
	#	mean	#	mean	#	mean	#	mean
Orientation to Home Economics	201	8.97	129	8.70*	199	7.95	128	7.76
Parenting	97	9.43	235	9.35	97	8.52	233	7.99***
Clothing and Textiles	161	8.80	171	8.34***	161	8.45	170	7.83**
Living Environment	55	8.80	276	8.50	55	7.84	275	7.69
Food and Nutrition	183	8.90	148	8.44***	183	8.39	147	7.92***
Adult Living	117	8.98	210	8.80	118	7.81	206	7.56
Resource Management	63	8.86	267	9.12	63	8.01	226	8.17

Group 1 = Respondents enrolled in specific course.

Group 2 = Respondents not enrolled in specific course.

*$p<.05$

**$p<.01$

***$p<.001$

Perceived competency indicated significant differences in parenting, clothing and textiles, and food and nutrition. Respondent mean scores for perceived importance and perceived competence were higher for those enrolled in specific home economics courses compared to those not enrolled except in the area of resource management.

DISCUSSION

The importance of problem-solving and decision-making concepts for functioning in adult life was perceived as very important by all respondents, with the grand mean equaling 8.77. However, respondents enrolled in home economics courses consistently rated concepts more important than respondents not enrolled in home economics courses with significant differences in 11 of the 16 concepts. The evidence from the data provides support for the acceptance of Hypothesis 1. This evidence is supported by the studies of Schultz (1989) and Clark & Reagan (1987).

Competency in problem-solving and decision-making skills as perceived by respondents enrolled in home economics courses was significantly different in 9 of the 16 concepts. All concepts yielded a mean score that was higher than respondents not enrolled in home economics courses. Perceived competence of respondents enrolled in home economics courses, when concepts were grouped by courses, also disclosed higher mean scores for every course, with significance observed in 5 of the 7 courses. The data yielded support for the acceptance of Hypothesis 2. These findings are supported by the research of Crawford and Hughes (1984) and Shannon and Watts (1982) of the effectiveness of parenthood education.

In response to Hypothesis 3, mean scores of respondents enrolled in specific home economics courses were higher than respondents not enrolled for 13 of the 16 problem-solving and decision-making concepts when rating perceived importance to adult life. However, significant differences are indicated in 8 of the 13 concepts. Corresponding competency mean scores were also higher for respondents enrolled in specific home economics courses in 13 of the 16 concepts, with significant differences in 5 of the 13 concepts. Respondents indicated higher mean scores for course groupings of concepts in 6 of the 7 courses, with the significant differences in perceived importance in 5 of the 7 courses and 3 of the 7 courses when observing perceived competence. The data provide insufficient evidence to either accept or reject Hypothesis 3.

However, mean scores of respondents enrolled in specific courses were higher than respondents not enrolled in both perceived importance and perceived competence. The data from the study support the research efforts of Crawford and Hughes (1984) and Zeolla and Gritzmacher (1982).

In regard to findings associated with Hypothesis 3, especially resource management course concepts, confounding variables may be present. Consumer education courses, comprised of resource management concepts, are required by the State of Illinois. These courses may or may not have been included in the home economics departments. This influence could confound the findings when attempting to measure the differences between the two groups of this

study. An additional confounding variable could be the years respondents were in high school and the focus of the teacher-training programs instructors had received while becoming certified. The reemergence of thinking-skill processes in secondary schools was begun in the early 1980s with the research of Goodlad and others. The educators teaching the respondents of this study would have received their training much earlier, when curricular emphasis was product rather than process oriented. This could be a confounding variable in this study.

Two limitations may be present within the study that would influence the interpretation of the results. Multiple comparisons were used to test the data, but the overall trend of the data was strong, lending support to the conclusions drawn. Also, there may be limitations in the generalizability of the results due to the procedures of data collection. Respondents gave permission to be interviewed giving some limitation to the random selection process. Because of the strength of the mean scores, this problem is considered minimal.

IMPLICATIONS

The very high ratings given the problem-solving and decision-making concepts of this study by all respondents gives further evidence that these concepts are important for functioning in adult life and that respondents do vary in their perceived competence of these processes. The support exists that those enrolled in home economics courses at the secondary education level do rate the perceived importance and their perceived competence of problem-solving and decision-making processes above those not enrolled in home economics courses. Costa (1985) states "teaching for thinking means teachers and administrators examine and strive to create school and classroom conditions that are conducive to children's thinking" (p. 20). Implications from this study indicate a need for curricular changes, inservice training for educators, and the need for further research in problem-solving and decision-making processes.

One implication indicated is the need for educators to strengthen the curriculum in home economics, fortifying problem-solving and decision-making processes in the subject matter areas. A current example exists in the curriculum revisions that have recently occurred in the state of Wisconsin. The state-wide home economics program title change to Family and Consumer Education was based on a conceptual change in the curriculum to "concepts of work and family

[combining] subject matter with the development of thinking skills" (Riley, 1989, p. 164). This refocus will help students in the home economics classroom better adjust to "changing sociological, technological, and occupational knowledge and skills that will help prepare them to lead full productive lives," (Riley, 1989, p. 164).

A second implication is the need for educator inservice training. As methods and focus on instructional outcomes change, administrators and classroom teachers must be trained in the processes to best educate their students for mastery of thinking skills. Teachers need to ascertain their ability in problem-solving and decision-making skills to best enable learners in using these processes.

A third implication indicated by this study is the need for ongoing research to discover the most effective methods for instruction of thinking skills. Brandt states that "national test data indicate students' test scores are declining in the problem solving and critical thinking areas rather than improving" (in Davis, 1989, p. 186). Goodlad (1984) found approximately one percent of student class time was spent in reasoning and thinking type activities. Smith (1988) seems to address it best. She states

> ... the underlying premise for designing a futuristic curriculum is that thinking or reasoning skills are the educational basics for the 21st century. Knowledge changes. Being able to acquire, manage, and use knowledge may be the only part of their education that

students will find useful throughout their lives.

(p. 184)

Through ongoing research, instruction and evaluation, building curricula and selection of instructional methods that best suit the needs of the learners in the development of competencies in problem-solving and decision-making processes can be achieved. Evidence in this study shows enrollment in home economics courses does make a difference in the perceived importance and competence of students in problem-solving and decision-making processes.

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APPENDIX A

FORMAL PROPOSAL

The document contained in this appendix is the original research proposal developed by the author and submitted to the thesis committee for formal acceptance by the Department of Human and Family Resources. The proposal provides information too lengthy to be included elsewhere and has been included in the appendix to this thesis because it was deemed necessary by the thesis committee. This decision was reached due to deviation from the traditional thesis format.

INTRODUCTION

Educational scholars and philosophers for centuries have mandated schools to develop the ability and utilization of thinking-skill processes in their students as a primary goal of education. Goodlad (1984), in his study of schooling, observed this aim reflected in the adopted goals of most state and individual school systems. He states the primary reason for this is because critical thinking is considered an important part of democratic citizenship and an essential life skill. Ennis (1985) defines critical thinking as "reasonable, reflective thinking that is focused on deciding what to believe or do," (p. 54). Marzano (1988) clarifies this definition by stating the "goal of teaching critical thinking is to develop people who are fair-minded, objective, and committed to clarity and accuracy," (p. 18). Two of the thinking processes derived from cirtical thinking include problem-solving and decision-making skills.

Problem-solving and decision-making skills have been key concepts integrated into the home economics curriculum implicated by the definition of home economics. Marjorie East (1980) defines home economics as "that field of study and that profession which applies rational judgement to domestic life," (p. 241). She further explains that home economics "examines the specifics of intimate environments and their relationship to the development and interaction of the

people who live in these environments," (p. 2). State and school curriculum guides include the concepts of problem solving and decision making within their home economics courses. These courses include orientation to home economics, resource management, child development, food and nutrition, adult living, clothing and textiles, parenting and living environments.

STATEMENT OF THE PROBLEM

The importance of teaching the concepts of problem solving and decision making in the schooling of our youth makes the assessment of student's perceived importance and competence in these skills vital. It is necessary to know if students are learning these skills in home economics classrooms. Do students feel these skills are important? Are students competent in problem-solving and decision-making skills as attained through the home economics curriculum?

PURPOSE

The purpose of this study is to assess the perceived importance and competence in the thinking skills of problem solving and decision making as attained through the home economics curriculum. Through this assessment, a first step can be made in determining effectiveness of consumer and homemaking classes in secondary schools in the instruction of these skill areas. This would provide a spring board for program justification as well as

ground work for further research into improvement of the teaching and assessment of actual student achievement in problem-solving and decision-making skills.

HYPOTHESES

1. There is no difference in perceived importance of problem-solving and decision-making skills between students who have completed two or more home economics courses and students who have taken one or less home economics courses.

2. There is no difference in perceived competence of problem-solving and decision-making skills between students who have completed two more or home economics courses and students who have taken one or less home economics courses.

3. There is no difference in perceived importance and perceived competence of problem-solving and decision-making skills between students who have completed specific courses in adult living, food and nutrition, living environments, parenting, or resource management and students who have not completed stated courses.

DEFINITION OF TERMS

Problem solving: to define or describe a problem, determine the outcome, select possible solutions, choose strategies, test trial solutions, evaluate the outcome and revise these steps when necessary (Costa, 1985, p. 312).

Decision making: the process leading to the selection of one or several options after consideration of facts or ideas, possible alternatives, probable consequences and personal values (Costa, 1985, p. 310).

Competence: properly qualified to, to be adequately capable of (Webster, 1966, p. 153).

Critical thinking: using basic thinking processes to analyze arguments and generate insight into particular meanings and interpretations (Costa, 1985), p. 310).

ASSUMPTIONS

It is assumed home economics teachers are including problem-solving and decision-making concepts in their classroom instruction as suggested by state curriculum guides and Illinois State Goals for Learning and Sample Learning Objectives and Task Lists for Occupation of Homemaking.

It is assumed the data base used for this study was collected and stored to maintain research integrity and statements made in the original data are correct.

REVIEW OF LITERATURE

Research in evaluating the effectiveness of consumer and homemaking programs has been limited. The National Institute of Education, responsible for the review and evaluation of the effectiveness of consumer and homemaking programs stated, "relatively

little rigorous research has been conducted on the effects of consumer and homemaking education programs on learners in terms of changes in knowledge, attitudes, or behavior," (U.S.D.E., 1981, pp. VI-24-25).

In response, some research involving student perceptions and attitudes has emerged. Among published research, emphasis has been on nutrition and consumer skills with specific groups, lacking much in the generalizability of the research. The Bryd-Brenbenner, O'Connell, and Shannon (1982) study, based on a specific junior high level nutrition curriculum, found knowledge scores improved with students who had enrolled in the consumer and homemaking classes. They also found an increase in positive attitudes toward home economics as students reached higher school grade levels. Crawford and Hughes (1984) focused on consumer issues with the consumer and homemaking curriculum in Iowa. Their basic finding found no differences in general knowledge of consumer skills between students who had taken three or more semesters of home economics classes and non-homemaking students. Students were surveyed six months post graduation. Selected mean differences were noted between the groups on specific consumer attitudes, intent, and behavior, especially in the ability to plan ahead and comparison shopping, favoring the students with a home economics background. The majority of these students felt homemaking classes had helped them as consumers.

Under a subcommittee of the Ad Hoc Committee of the American Vocational Association, a longitudinal study of home economics'

graduates across the nation was developed and analyzed at Pennsylvania State University by Mears and Ray as quoted by Gritzmacher (1988). Results had mixed evaluations due to average and low reliability coefficients of the instrument and great variability in the procedures of conducting the research project state to state (Gritzmacher, 1988, p. 32). Ohio State University, under the direction of Joan Gritzmacher, has attempted to continue this project. Despite numerous problems with this project, data collected does provide "evidence that graduates are exhibiting behaviors related to home economics content," (Gritzmacher, 1988, p. 42).

A continual lack of published research on program effectiveness of consumer and homemaking classes is the lack of assessment of the specific concepts of problem-solving and decision-making skills. A 1989 research project of the American Home Economics Association of American teens found 34% of America's youth are concerned with making wrong decisions. In addition, 33% felt schools should prepare them for making important life decisions. With 55% reporting that they would turn to a friend when making important decisions, the implication for effective development of these skills is vital (Schultz, 1989).

Critical thinking skills have been addressed throughout great volumes of educational books and journals, including definitions, importance of procedures to teach and learn, and evaluation of these skills. Again, actual published research of assessment is minimal.

Much of this could be attributed to the relative infancy of this body of knowledge surrounding this vital concept.

Goodlad's (1984) study of schooling found most schools address the importance of thinking skills in their curriculum but discovered teachers lacking in the methods and materials to promote this, relying on workbooks, fill in the blank objective exams, and lecturing for information presentation (p. 237-238). Arand & Harding (1987) investigated curricular frameworks focusing on the integration of problem solving skills, testing various curricular designs with student outcomes with the Watson-Glaser Critical Thinking Appraisal. His results concluded significant change was observed when a problem-solving approach to curriculum presentation was instituted over traditional teaching methods. It was also found that "changes in problem-solving skills were found to be more significant after the passage of time rather than immediately following a course," (p. 16).

In an attempt to assist researchers in their study of critical thinking in home economics education, the Journal of Vocational Home Economics Education presented four articles describing and analyzing differing research designs available. All presenters agreed on the need for production and identification of beginning goals for "building a research agenda in the area of critical thinking," (Way, 1989, p. 1). Each method did present its benefits and limitations depending on the specific researchers' purpose. Overall, it was evident by all presenters that "there is a broad acceptance today that home economics has an important and

unique role to play in helping people develop critical thinking skills" (Way, 1989, p. 1).

PROCEDURES

This study will use extant data drawn from the survey and data collected and funded under the 1987-1989 Illinois State Board of Education/Department of Adult, Vocational and Technical Education grant: Evaluating Program Outcomes: Occupation of Homemaking. Primary objectives for the grant included the necessity of assessing problem-solving and decision-making skills in home economics classrooms. Specific questions in the survey targeted these concepts.

The research design of the study included the stratified random sample selection of eight geographical areas of Illinois. The 333 students sampled graduated from high school between the years of 1979 and 1984. The randomly selected students were grouped by those who had enrolled in two or more home economics classes while in high school, and students who had less than two or no home economics classes. Each student received a letter and consent form to sign before being contacted by the Public Opinion Laboratory at Northern Illinois University for the computer-assisted telephone survey by professional telephone interviewers.

The instrument consists of a 143-item survey including demographic data, family characteristics, course information, and course content. Course content questions were written in a Likert-

type scale of 0-10; 0 = no importance/competence and 10 = highest importance/competence. Each respondent answered each question twice, first on the degree of importance of the knowledge that the concept presented to adult life and second, how competent the respondent assesses him/herself in relation to the concept. One hundred and two concept questions were derived from the Illinois State Goals for Learning and Sample Learning Objectives, Tasks Lists for the Occupation of Homemaking, and the legislative parameters of the Vocational Amendments of 1976 and the Carl Perkins Vocational Education Act of 1984 defining the Occupation of Homemaking. Content validation was determined by two procedures. The first included a review of the instrument by experts representing vocational teacher education programs in Illinois universities and second, a review by leaders in the field from differing geographic locations throughout Illinois. Reliability was addressed by field testing the instrument and the use of Cronbach's Alpha reliability test.

For the purposes of this study, 32 of the 102 content related questions will be used, as selected by a team of home economists. These questions deal directly with problem solving and decision making skills. The specific question numbers include 24-31, 44-45, 68-69, 72-75, 80-81, 92-93, 96-97, 102-105, and 110-115. Questions concerning the demographics of respondents are to be utilized.

ANALYSIS PLAN

Data will be analyzed utilizing the SPSSX statistical package on Northern Illinois University's Amdahl mainframe computing system.

Descriptive data and statistical analysis tests suitable for scale-type data will be computed. Level of confidence has been set at $p < .05$.

Perceived importance and competence of concepts will be analyzed by observations of means of students enrolled and not enrolled in home economics courses. A second analyzation will look at the perceived importance and competence of concepts by respondents enrolled and not enrolled in specific courses.

Concepts will then be grouped by specific courses with mean scores of perceived importance and competence of respondents computed and statistically tested. Computations will include: first, respondents enrolled and not enrolled in home economics and second, respondents enrolled and not enrolled in specific courses as per concept.

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APPENDIX B

INTERVIEW SCHEDULE

Evaluating Program Outcomes: Occupation of Homemaking
Interview Schedule

PART I

This part of the Interview concerns the Home Economics courses you may have had in high school. You may have had a course with these concepts but the title may have been different.

1. Yes, I took a course with the title or similar title.

2. Yes, I took a course that included these concepts but with different title.

3. No, I did not take such a course.

1. Orientation to Home Economics
2. Food and Nutrition
3. Clothing and Textiles
4. Child Development
5. Parenting
6. Adult Living
7. Resource Management
8. Living Environments

PART II

For statements numbered 9-11, please indicate how strongly you agree or disagree with them. Use the following responses:

5 Strongly Agree
4 Agree
3 Undecided
2 Disagree
1 Strongly Disagree
0 Not Applicable

9. Home Economics courses were helpful to me in making employment, job, or career choices.

10. A Home Economics teacher was helpful to me in making decisions about further education or employment.

11. A Home Economics teacher was helpful to me in, solving personal problems.

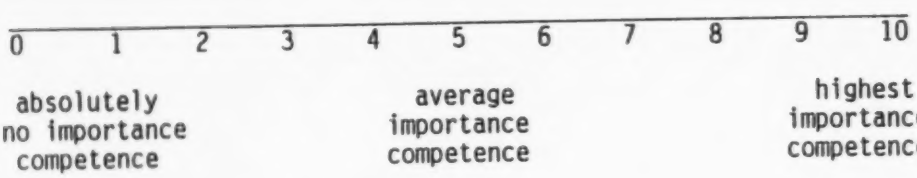
PART III

For each of the following topics please answer two (2) questions.

1. How important is this concept for adults in their functioning as a person, worker/student, parent, spouse and/or partner.

2. How competent do you think you are in this topic?

Using a scale of 0-10, with a 0 meaning "little or no importance" or "little or no competence," 5 meaning "average importance" or "average competence" and 10 meaning "extremely important" or "a great deal of competence," indicate to the interviewer the extent in which these concepts are important to adults functioning in everyday life and how competent you are in that area.



TOPICS IN MULTIPLE AREAS

_____ 12. Understanding of one's self values, needs, goals.
_____ 13.
_____ 14. Relationships with family members and other individuals.
_____ 15.
_____ 16. Use of leisure time.
_____ 17.
_____ 18. Handling conflict.
_____ 19.
_____ 20. Legal aspects of families.
_____ 21.
_____ 22. Professionalism in one's career.
_____ 23.
_____ 24.* Decision making.
_____ 25.*
_____ 26.* Time management.
_____ 27.*
_____ 28.* Career information & selection of educational program.
_____ 29.*
_____ 30.* Problem solving.
_____ 31.*

PARENTING

_____ 32. Responsibility of parenting and considerations in becoming a parent.
_____ 33.
_____ 34. Parental roles and expectations.
_____ 35.
_____ 36. Child's impact on the parent.
_____ 37.
_____ 38. Parent's impact on the child.
_____ 39.
_____ 40. Alternative styles of parenting and child care.
_____ 41.
_____ 42. Understanding the importance of communication between parent and child.
_____ 43.
_____ 44.* Meeting family crises.
_____ 45.*

CHILD DEVELOPMENT

_____ 46. Prenatal development.
_____ 47.
_____ 48. Physical development of children.
_____ 49.
_____ 50. Emotional development of children.
_____ 51.
_____ 52. Intellectual development of children.
_____ 53.
_____ 54. Patterns of social development in children.
_____ 55.
_____ 56. Principles of guidance and discipline for different stages of development.
_____ 57.
_____ 58. Ways of interacting with children that are supportive and encourage development.
_____ 59.

CLOTHING AND TEXTILES

_____ 60. Skills in sewing.
_____ 61.
_____ 62. Fabric identification, properties and finishes.
_____ 63.
_____ 64. Pattern selection and alterations.
_____ 65.
_____ 66. Garment construction.
_____ 67.
_____ 68.* Comparison shopping for clothing.
_____ 69.*
_____ 70. Care of clothing.
_____ 71.
_____ 72.* Clothing selection.
_____ 73.*

LIVING ENVIRONMENT

_____ 74.* Making housing choices.
_____ 75.*
_____ 76. Functional home design.
_____ 77.
_____ 78. Energy use and conservation at home.
_____ 79.
_____ 80.* Furniture selection, construction, and cost.
_____ 81.*
_____ 82. Cleaning and care of a home and furnishings.
_____ 83.

FOODS AND NUTRITION

_____ 84. Function and sources of nutrients.
_____ 85.
_____ 86. Relationship of food to dietary needs, special situations, and the life cycle.
_____ 87.
_____ 88. Food preparation.
_____ 89.
_____ 90. Planning for individual and/or family nutritional needs.
_____ 91.
_____ 92.* Selecting and purchasing prepared and non-prepared food.
_____ 93.*
_____ 94. Safety and sanitation practices.
_____ 95.
_____ 96.* Selection, use and care of kitchen equipment.
_____ 97.*

ADULT LIVING

_____ 98. Personal roles and role expectations.
_____ 99.
_____100. Understanding the elderly.
_____101.
_____102.* Mate selection.
_____103.*
_____104.* Changing family lifestyles
_____105.*
_____106. Building positive relationships with others.
_____107.
_____108. Transferring human relations skills to the work place.
_____109.

RESOURCE MANAGEMENT

_____110.* Establishing priorities of needs and wants.
_____111.*
_____112.* Comparative shopping.
_____113.*
_____114.* Goal setting and decision making skills.
_____115.*
_____116. Consumer rights and responsibilities.
_____117.
_____118. Effect of life cycle changes on financial plans and needs
_____119.
_____120. Interdependence of consumer, producers and citizens in U.S. economic, political, social system.
_____121.
_____122. Principles of money management including budgeting.
_____123.
_____124. Types and sources of consumer credit and agreement.
_____125.

PART IV

126. Indicate your marital status.

A. Single, never married
B. Married, first time
C. Remarried
D. Separated
E. Divorced
F. Widowed

127. Sex

A. Female
B. Male

128. Ethnic Designation

A. White not Hispanic
B. Black not Hispanic
C. Hispanic not Black or White
D. Asian American or Pacific Islander
E. North American Indian or Alaskan Native
F. Other

129. Which of the following best describes the household in which you live?

A. I live by myself
B. I live with other adults
C. I live with children
D. I live with children and other adults.

130. If you live by yourself, skip down to question #133. If there are others living in your household are they:

A. Immediate family members only
B. All relatives, but not just immediate family
C. Friends that are not relatives
D. A combination of friend(s) and relatives
E. Other

131. Do you have any children, who are 17 years of age or younger, that do NOT live with you?

A. No children
B. One child
C. Two children
D. Three or more children

132. How much monthly support do you give to your children not living with you?

A. None
B. $1-100
C. $101-300
D. $300 or more

133. What is YOUR individual annual income?

A. Less than $5000
B. $5000-7500
C. $7500-10,000
D. $10,000-15,000
E. $15,000-20,000
F. $20,000-25,000
G. $25,000-35,000
H. $35,000-50,000
I. $50,000 and over
J. Don't Know

134. What is your TOTAL HOUSEHOLD income?

A. Less than $5000
B. $5000-7500
C. $7500-10,000
D. $10,000-15,000
E. $15,000-20,000
F. $20,000-25,000
G. $25,000-35,000
H. $35,000-50,000
I. $50,000 and over
J. Don't know

135. Presently, what is your employment status?

A. Working full-time
B. Working part-time
C. Have job, but ill, on vacation or strike
D. Unemployed, laid-off, looking for work
E. In school
F. Keeping house
G. Other

136. Approximate enrollment in my high school was:

A. under 200 students
B. 201-300
C. 301-500
D. 501-1,000
E. over 1,000

137. You were or should have been graduated from high school in:

A. 1984
B. 1983
C. 1982
D. 1981
E. 1980
F. 1979

138. Did you take home economics in high school?

A. Yes
B. No

139. I took home economics in high school for:

A. 1 semester
B. 2 semesters
C. 3 semesters
D. 4 semesters
E. More than four semesters

140. Were you involved in FHA/HERO?

A. Yes
B. No

141. Did you receive a high school diploma or GED?

A. Yes
B. No

142. What is the highest level of education you have completed?

A. Attended high school, didn't graduate
B. Graduated high school
C. Attended college, didn't graduate
D. Graduated from 2 year college (Associate's degree)
E. Graduated from 4 year college (Bachelor's degree)
F. Some post-graduate study (beyond Bachelor's degree)
G. Post-graduate degree (M.D., M.S., Ph.D., M.B.A., etc.)

143. Any additional comments you would like to make?

*Concept items used.

APPENDIX C

HUMAN SUBJECTS IN RESEARCH APPROVAL

Northern Illinois University
DeKalb, Illinois 60115

The Graduate School
815 753 0395

April 14, 1988

MEMORANDUM

TO: Helen Bruce Winsor
Department of Human and Family Resources

FROM: Philip T.K. Daniel
Assistant Dean and IRB Chair

RE: Faculty Research Involving the Use of Human Subjects for the Project Titled "Evaluating Program Outcomes: Occupation of Homemaking"

Your above-named research project has been approved by this office as exempt from the Code of Federal regulations (45 CFR 46) for protection of Human Subjects. The rationale for exemption is section 46.101b paragraphs 1 and 3. Your data collection may begin upon receipt of this letter. Please accept my best wishes for success in your research endeavors.

PTKD/skr

cc: R. Yang
S.K. Rettig

Northern Illinois University is an Equal Opportunity/Affirmative Action Employer